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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS

APPLICANT: SERRA OBIOL, Ramon

SERIAL NO.: 09/463,914 ART UNIT: 3724

FILED: February 1, 2000 EXAMINER: Flores Sanchez, O.

TITLE: SYSTEM FOR FIXING ROTARY CUTTING DIES IN MACHINES FOR DIE CUTTING LAMINAR MATERIAL

APPLICANT'S BRIEF IN SUPPORT OF APPEAL

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an appeal from the Final Rejection of Claims 50-57. Claims 1-49 are no longer pending because these claims were canceled in a previous amendment

The appeal brief is being re-submitted in response to the Notice of Non-Compliant Appeal Brief of July 25, 2006, having a response being due by August 25, 2006. A copy of which is attached hereto.

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CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

I hereby certify that the attached correspondence comprising:

APPEAL BRIEF

is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

on _____.

Respectfully submitted,

_____ _____

Date John S. Egbert
Reg. No. 30,627
Andrew. W. Chu
Reg. No. 46,625

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REAL PARTY IN INTEREST

The person named in the caption, Mr. Ramon SERRA OBIOL, is the inventor only. The Assignee, Comercial Industrial Maquinaria Carton Ondulado S.A. (CIMCO S.A.), is the real party in interest in the present appeal.

RELATED APPEALS AND INTERFERENCES

There are no other related appeals or interferences known to Applicant which will directly affect or be directly affected by or have a bearing on the Board's decision in the present appeal.

STATUS OF CLAIMS

Originally, Claims 1 - 11 were filed in this case, having independent Claim 1 as a national stage application. The 35 U.S.C. §371 requirements were completed on February 1, 2000.

After the first Office Action of December 8, 2000, Applicant canceled original claims, Claims 1-11, and substituted Claims 11 -21. The new independent Claim 11 corresponded to the original independent claim while incorporating intervening dependent claims. There was a minor error because original Claim 11 was overwritten as the new base independent claim.

After a Final Action and Request for Continued Examination on May 8, 2001, Applicant canceled Claims 11-21, and substituted Claims 22-32. The new independent Claim 22 incorporated more limitations and corresponded to the previously pending independent claim, Claim 11.

After the Third Office Action on October 23, 2001, Applicant canceled Claims 22-32, and substituted Claims 33-41. The new independent Claim 33 incorporated more limitations and corresponded to the previously pending independent claim, Claim 22. Applicant made additional remarks regarding the prior art without amendments to the claims.

The Application was lost in the U.S. Patent and Trademark Office for almost three years because of the conversion into an image file wrapper and misplacing the Amendment by the U.S. Patent and Trademark Office. Applicant filed a responsive amendment on January 26, 2002, and the U.S. Patent and Trademark Office was not able to enter this amendment until August 5, 2003. Applicant made inquiries to the Examiner to check the status of this application to secure the eventual re-construction of this file. An Office Action was eventually issued over one year later on January 13, 2005.

Another Final Action and Request for Continued Examination on January 13, 2005, was finally received. In response, Applicant canceled Claims 33-41, and substituted Claims 42-49. The new independent Claim 42 incorporated more limitations and corresponded to the previously pending independent claim, Claim 33.

After the Fifth Office Action on June 15, 2005, Applicant canceled Claims 42-49, and substituted Claims 50-57. The new independent Claim 50 incorporated more limitations and corresponded to the previously pending independent claim, Claim 42.

After another Final Action rejecting Claims 50-57, the present appeal was filed. Claims 1-49 were canceled in previous amendments. Claims 50-57 are the pending claims at issue in the present appeal.

STATUS OF AMENDMENTS

No amendments have been filed subsequent to the Final Rejection of January 26, 2006.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention discloses a rotary die cutter in a die cutting machine for cutting laminar material. The system has a fixing means between the die and a die-holder surface or cylinder around which the die is arranged. The fixing means include a plurality of bolts actuated by an actuator housed inside a hollow body fixed to the die-holder cylinder in order to provide for a rapid fixing of the rotary die to the die-holder cylinder.

The sole independent claim discloses an apparatus for die cutting laminar material. The apparatus has a cutting die support cylinder 2 having a cylindrical outer surface, a cutting die 1 having a curved shape, and a fixing means for securing the cutting die 1 to said cutting die support cylinder 2. The fixing means includes a bolt 3 and a working means of a dynamic fluid cylinder 5 in a hollow body 8. These structures are shown in Figures 1, 2, and 3 with the reference numerals as provided herein and are described in the specification on page 5, l.3 to page 7, l. 27. Additional structures are described as well. The cutting die support cylinder 2 has two 180° halves. The cutting die 1 has a curved inner surface conforming to the cylindrical outer surface of the cutting die support cylinder2. There are a plurality of holes formed so the support cylinder to extend from the curved inner surface to an exterior surface of the cutting die. The fixing means is specifically referenced on page 5, ll. 8-10. The bolt 3 of the fixing means has a shank and a head 7. The working means is specifically reference on page 5, l. 10 and page 6, ll. 23-27, including a dynamic fluid cylinder 5 and a hollow body 8 affixed to the cutting die support cylinder 2. The working means operatively connects said bolt for moving from a retracted position to an extended position. The working means includes a dynamic fluid cylinder 5, each acting independently of each other and having a spring cooperative with the bolt such that the bolt remains in the retracted position when the bolt is

obstructed from moving to the extended position.

The "means + function" terms in the claims are identified as follows:

Claim	term	specification and drawings
50	fixing means	Figures 1, 2, and 3, reference numerals 3, 5, 7, and 8; specification, Page 5, ll. 8-10, Page 5, ll. 12-26, Page 5, l. 34 to Page 6, l. 5.
50	working means	Figures 1, and 5-8, reference numerals 5, 6, 8, and 14; specification, Page 5, l.10, Page 6, ll. 7-21, Page 6 ll. 23-27.

Additional references to secondary structures of the fixing means and the working means are contained throughout pages 5-7 of the specification, including a description of the process of actuating the apparatus through the working means and bolt of the fixing means.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

In the Final Office Action of January 26, 2006, it was indicated that Claims 50-52, 54 and 56 (sic) were rejected under 35 U.S.C. §103(a) as being obvious over the Quinlan patent in view of the Katz patent. Claims 53-55 were also rejected under 35 U.S.C. §103(a) as being obvious over the Quinlan patent in view of the Katz patent. Claim 57 was rejected under 35 U.S.C. §103(a) as being obvious over the Quinlan patent in view of the Katz patent and in further view of the Harrison patent.

ARGUMENT

I. OVERVIEW

Applicant amended the independent claim to recite the limitation of a working means with a plurality of fluid dynamic cylinders, each acting independently of each other in the two halves of

the cutting die machine. Thus, the invention of Claim 50 is not made obvious by the combination of prior art. Furthermore, the prior art combination should be re-considered because of the hindsight analysis used to reject the claims.

II. THE INVENTION IS NOT MADE OBVIOUS BY THE PRIOR ART COMBINATION

In determining the propriety of the Patent Office's position as to obviousness in the first instance, it is first necessary to ascertain whether or not the referenced teachings would appear to be sufficient to one of ordinary skill in the relevant art knowing the reference before him to make the proposed substitution, combination, or other modification. In re Lintner, 458 F.2d 1013, 1016, 173 U.S.P.Q. 560 (C.C.P.A. 1972). A conclusion of obviousness may not be based on an impermissible hindsight reconstruction of the art. Application of Van Wanderhim, 378 F.2d 981 (C.C.P.A. 1967). It is insufficient to show merely that each separate element of a claimed invention can be found in one or various prior art references. Canadian Ingersoll-Rand Co. v. Peterson Products, Inc., 223 F.Supp. 803, 139 U.S.P.Q. 61 (N.D. Cal. 1963). There should be some teaching, or at least suggestion, in the prior art that the individual elements can, or should, be combined as claimed. In re Regel, 526 F.2d 1399, 1403, 188 U.S.P.Q. 136 (C.C.P.A. 1975).

A. ONE SKILLED IN THE ART WOULD NOT COMBINE THE PRIOR ART QUINLAN PATENT AND KATZ PATENT

The present invention was intended to be an improvement over the prior art techniques for applying cutting dies to support cylinders. This invention improves the old technique in which separate screws have to be applied to each of the cutting dies to secure the cutting dies within the threaded connection formed in the support cylinders. Specifically, in the original specification under

the "Background", it was stated that:

> At present, the rotary cutting dies are fixed on the cutting die support by means of screws that are coupled to the corresponding screw holes made on the surface of cutting die support cylinder.
>
> This fixing system has the main inconvenience that it is excessively slow, as a considerable number of screws have to be placed.

The prior art Quinlan patent discloses this known prior art machine with a cutting die support cylinder, a cutting die, holes, and a fixing means of separate screws in the surface of the cylinder. There is no suggestion that the known rotary cutting die of the Quinlan patent should be combined with the fixing means of the Katz patent in order to make the present invention obvious.

1. Different purposes and functionality

The Quinlan patent specifically describes this prior technique for joining the cutting die onto the cutting die support cylinder. Specifically, it was recited in column 5, lines 7 - 20 that:

> In Fig.4, the fastening means 21 is shown as being a conventional flat-head fastener having a head portion 28 adapted to bear against die board convex surface 19, and having a threaded shank portion 29 passed through slot 20 and engaged with die drum tapped hole 14. Hence, the fastening means 21 may be selectively loosened to permit longitudinal movement of die board 16 relative to die drum 12, and selectively tightened to securely hold the die board 16 to the die drum 12 at a selected position. Persons skilled in this art will recognize that if it is desired to shift the die board 16 along the die drum 12 a greater distance than that permitted by the longitudinal extent of slots 20, before fastening means 21 may be relocated to another set of die drum holes 14 to permit such desired die board movement.

As such, the prior art Quinlan patent simply recites the known prior art. In other words, in order to fasten the cutting die to the cutting die support cylinder, one has to apply the various flat-head

fasteners into the separate screw holes in a mechanical manner. The cutting die is attached to the cylindrical surface without regard to the ends of the cylinder. This process takes an excessive amount of time and is very inconvenient because the different shapes of cutting dies require individual manipulation of the bolts in the holes across the cylindrical surface, as was recited in the "Background" portion of the present specification. The Quinlan patent appears to only disclose known prior art to that of the present invention.

In contrast, the Katz patent discloses a fluid dynamic spring-mounted bolt which is movable between a retracted position and an extended position. When the pneumatic valve is operated, the bolts will extend outwardly of the machine spindle. As a result, the tool can be rotated such that the slots are separated from the bolts. The bolts will extend outwardly so that a new tool can be placed thereon in a quick and efficient manner. The cylinder is then actuated to retract the bolts so as to secure the machining disc onto the machining spindle. The bolts extend from an end of the cylinder, and not the surface.

2. The combination should be re-considered

Fundamentally, Applicant respectfully contends that one having ordinary skill in the art of the Quinlan patent would not turn to the teachings of the Katz patent except through a hindsight reconstruction of the present invention. The common problem of connecting a blade to a support holder does not make the Quinlan patent and the Katz patent analogous. The blades are different between the rotary tools of the prior art combination; the blades are placed in significantly different locations; and the fixing means for the blades require different controls and coordination.

The Quinlan patent addresses the particular difficulties of fixedly attaching a cutting die to the curved cylindrical surface of the two halves of the rotary cutting die machine. The spacing and

shape and levels of the cutting die on the cylindrical surface require special consideration and flexibility in the actuation and control of each bolt. For example, the cutting die could be L-shaped such that only particular bolts are active. The holes and bolts throughout the surface of the cylinder will not be treated uniformly. In contrast, the Katz patent requires coordinated bolts at the end of the cylinder because the rotary tool is attached flushed to the end of the cylinder. The end is a flat planar surface, and the bolts are extended and retracted axially from the rotary tool spindle and from this planar surface. The bolts are coordinated and linked on the end surface of the cylinder so that the rotary tool can easily be removed and changed. If one bolt acts independently from the other bolts, then the tool will not be able to be attached to the end of the cylinder or the tool will not be able to be removed from the end of the cylinder.

Although both patents relate to attachments to rotary tools, the problems addressed by the two patents address different problems for different portions of different types of rotary tools. The Quinlan patent utilizes mechanical bolts and/or screws for securing the cutting die to the surface of the cutting cylinder. The Quinlan patent has some bolts remaining in the retracted condition when a particular type of cutting die is secured to other bolts. The Katz patent is directed to the quick removal of machining discs at the ends of a cylinder, and it is difficult to see how one skilled in the art would associate need for coordinated planar alignment of the bolts and holes in the Katz patent with the required flexibility of the bolts and holes on the curved surface of the Quinlan patent.

On this basis, Applicant respectfully contends that the teachings of the Quinlan patent would not cause one with ordinary skill in the art to look for technology associated with the Katz patent. Applicant respectfully contends that the combination of these references are merely a hindsight analysis and, hence, should not make obvious the teachings of the present invention.

Furthermore, Applicant notes that the Quinian patent was first recited in the rejection of fifth rejection on June 15, 2005 as a primary reference. There have now been five (5) Official Actions and over six (6) years associated with the present application. Applicant is specifically concerned as to why a such a pivotal reference has not been recited until the Fifth Office Action herein. Quite clearly, the failure to recite such a prior art patent is evidence, in itself, of the non-obviousness of the present combination.

B. THE COMBINATION OF THE PRIOR ART FAILS TO TEACH ALL ELEMENTS OF THE INVENTION AS NOW CLAIMED

Although it is admitted that prior art does show features of the present invention, there is no disclosure of the invention as now claimed. There is nothing in the prior art combination that would reveal the "working means comprising a plurality of fluid dynamic cylinders each acting independently of each other in said two 180° halves" achieved by the present invention.

Relative to the present claims, Applicant notes that there are no teachings in these prior art combination that the fluid dynamic cylinders act independently of each other. Quite clearly, in the Katz patent, each of the bolt-receiving fluid-dynamic cylinders must operate in concert so that each of the bolts extends outwardly simultaneously in a coordinated manner. There would be no way to make the operations independent of each other. The bolts are circumferentially aligned in the same plane such that the cutting tool cannot be placed flush against the cylinder without coordination. Independent bolts in the Katz patent would result in an uneven surface, rendering the cutting tool ineffectual and dangerous. The reference to "the lifting off or the movement of the clamping members may also be effected by a plurality of pistons" has no relation to the independence of the cylinders. The fact that more than one piston is used does not address the property of independent

control of each cylinder. Multiple pistons can be used for a variety of reasons, such as additional pressure and even distribution of force on the bolts, such that one skilled in the art cannot conclude that the bolts of the Katz patent function independently from each other. Furthermore, the Katz patent discloses a rotary tool, and not a rotary die cutting machine, such that more than one cylinder is not required for the invention. As such, the Katz patent does not disclose independent cylinders.

The Quinlan patent does not disclose independent cylinders either because the rotary cutting die machine is silent on this issue. There is no suggestion of any improvement needed in this area, and the mere recitation of the prior art rotary cutting die machine discloses nothing about the improved fixing means of the present invention and limitation proposed in the present invention.

Additionally, there is no teaching in either of the Quinlan or Katz patents that the bolt of the fixing means remain in the retracted position when the bolt is obstructed from moving from the extended position. Fundamentally, for the device associated with the Katz patent to operate properly, all of the bolts must be extended together so as to allow for the attachment or removal of the disc-shaped machining tool. The present invention allows for the retention of the bolt within the hole where the hole associated with the cutting die does not align with a particular bolt. As such, the prior art combination would fail to show the limitation of the "plurality of dynamic cylinders each act independently of each other" in the two 180° halves of the cutting die support cylinder. On this basis, Applicant respectfully contends that independent Claim 50 is patentably distinguishable from the prior art combination.

It is important to note that the present application is a national stage application of an international patent application. The national stage applications in various countries have already determined and validated the patentable subject matter of the present application, such that multiple

patents in other countries have issued. Copies of these allowed patents are attached hereto.

Based upon the foregoing analysis, Applicant contends that independent Claim 50 is now in proper condition for allowance. Additionally, those claims which are dependent upon Claim 50 should also be in condition for allowance. Reconsideration of the rejections and allowance of the claims at an early date is earnestly solicited. Since no new claims have been added above those originally paid for, no an additional fee is required.

III. SUMMARY

Based upon the foregoing analysis, it is Applicants' contention that Claims 50-57 of the present invention are patentably distinguishable from the prior art combinations.

The foregoing Brief is intended to assist the Board of Appeals in examining the application and, in the course of explanation, may employ shortened or more specific or variant descriptions of some of the claim language. Such descriptions are not intended to limit the scope of the claims; the actual claim language should be considered in each case. Furthermore, the remarks are not considered to be exhaustive of the facets of the invention which render it patentable, being only examples of certain advantageous features and differences which Applicants' attorney chooses to mention at this time. The required fee for transmittal of the appeal brief is enclosed herewith.

Reconsideration of the application, as amended, and allowance hereof are respectfully requested.

Respectfully submitted,

8-1-06

Date

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CLAIMS APPENDIX

50. An apparatus for die cutting laminar material comprising:

a cutting die support cylinder having a cylindrical outer surface, said cutting die support cylinder having a two 180° halves;

a cutting die having a curved shape, said cutting die having a curved inner surface conforming to said cylindrical outer surface of said cutting die support cylinder, said cutting die having a plurality of holes formed therein so as to extend from said curved inner surface to an exterior surface of said cutting die; and

a fixing means for securing said cutting die to said cutting die support cylinder, said fixing means comprising:

a bolt having a shank and a head, said head having a larger area than an area of a cross-section of said shank in parallel relation to said head; and

a working means housed within a hollow body affixed to said cutting die support cylinder, said working means operatively connected to said bolt for moving said bolt from a retracted position to an extended position, said head of said bolt extending outwardly of said cutting die support cylinder through one of said plurality of holes of said cutting die when in said extended position, said working means being a dynamic fluid cylinder, said head of said bolt being secured to said cutting die when in said extended position, said working means comprising a plurality of fluid dynamic cylinders each acting independently of each other in said two 180° halves, each of said plurality of fluid dynamic cylinders having a spring cooperative with said bolt such that said bolt remains in said retracted position when said bolt is obstructed from moving to the extended position.

51. The apparatus of Claim 50, said dynamic fluid cylinder being a pneumatic cylinder.

52. The apparatus of Claim 50, said dynamic fluid cylinder being a hydraulic cylinder.

53. The apparatus of Claim 50, said plurality of holes of said cutting die being quincuxes, said head of bolt being resiliently retained in one of said quincuxes when said bolt is in said retracted position.

54. The apparatus of Claim 50, said cutting die support cylinder having a plurality of threaded holes formed thereon, said cutting die having respective fasteners received by said plurality of threaded holes so as to secure said cutting die to said cutting die support cylinder.

55. The apparatus of Claim 55, said plurality of threaded holes having respective quincurixes formed at said surface of said cutting die support cylinder.

56. The apparatus of Claim 50, said cutting die being centered on said cutting die support cylinder.

57. The apparatus of Claim 56, said cutting die support cylinder having a circumferential stop and an axial stop, said cutting die having an edge abutting said circumferential stop and a centering guide receiving said axial stop.

EVIDENCE APPENDIX

1. European Patent No. 1 008 425

2. Canadian Patent No. 2 298 672

3. Spanish Patent No. 2 155 334

RELATED PROCEEDINGS APPENDIX

Not Applicable.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/463,914	02/01/2000	RAMON SERRA OBIOL	1672-3	6950

7590 07/25/2006

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EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Notification of Non-Compliant Appeal Brief (37 CFR 41.37)	Application No. 09/463,914	Applicant(s) SERRA OBIOL, RAMON	
	Examiner Omar Flores-Sánchez	Art Unit 3724	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The Appeal Brief filed on *01 May 2006* is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file anamended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer. **EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.**

1. ☐ The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.

2. ☐ The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).

3. ☐ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).

4. ☒ (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).

5. ☐ The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi))

6. ☐ The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).

7. ☐ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).

8. ☐ The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner **and relied upon by appellant in the appeal**, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).

9. ☐ The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).

10. ☐ Other (including any explanation in support of the above items):

BOYER D. ASHLEY
SUPERVISORY PATENT EXAMINER